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OFFICE OF THE DEAN

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August 1, 1974

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Office of Training
Central Intelligence Agency
Washington, D. C. 20505

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The purpose of this letter is to bring you up to date on the Maryland - ITV plans and prospects, and to outline the future course of events as well as can be anticipated at this time. Early this past Spring we had anticipated that we would have reached the firm decision stage by this time, but an unfortunate, and unpredictable, series of events has caused a delay.

At the present time we have firm commitments from nine organizations (government and private industry) with an additional five that have indicated (orally) a very strong positive intent. As a consequence of the "firm" commitments assuring us approximately (2/3) of the funding income necessary, we prepared a proposal to the Chancellor of the College Park Campus recommending that we proceed with the installation utilizing internal University resources and amortizing the capital requirements over a five to seven year period. The Chancellor endorsed the proposal, added more specific details on funding resources and procedures, and the intent was to seek the approval of the University President and Board of Regents in April. If this had materialized, we estimated that we would be in operation for the Spring Semester of 1975.

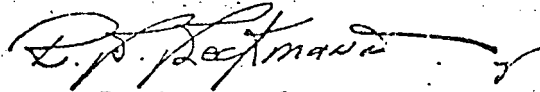
Unfortunately, due to a variety of circumstances the Chancellor was not able to place the proposal before the Board of Regents before their summer recess period and the earliest possible consideration by the Board would not appear to be September. Many of you have probably read, also, where Chancellor Bishop has resigned to become President of the University of Arkansas System and this adds an additional unknown complicating factor. We will shortly have an Acting Chancellor while the search proceeds for the new Chancellor. Just what effect this will have on our planning is unknown although I am sure it will undoubtedly cause some additional delays as the new Chancellor will want to thoroughly review the situation.

We still hope to place our proposal before the Board of Regents at the earliest opportunity once the Fall Semester begins. If the Board's decision is negative, this will obviously terminate the project. If the Board's decision is positive, one of our first actions will be to seek a representative from each of the sponsoring government/industry organizations to serve on an advisory board to assist and advise us with the necessary details and planning to get the sytem operational. I would anticipate this group to meet at monthly intervals. With approval at this late date, the system would not be operational until the summer (late) of 1975, in time for that Fall Semester.

Again, it is unfortunate that the sequence of events of this Spring and Summer caused this further delay in reaching a definitive decision. With the College of Business and Management now a partner in sponsoring the ITV Network and the participation of the physical sciences such as mathematics, physics, and computer science we are certain the Network will be a major asset for educational and employment opportunities in the area.

As further developments progress I will keep you informed, and thank you for your patience.

Sincerely yours,



R. B. Beckmann
Dean

RBB:sf

A PROPOSAL FOR
THE UNIVERSITY OF MARYLAND
INSTRUCTIONAL TELEVISION NETWORK

Prepared by

The College of Engineering
College Park, Maryland 20742
February 1972

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INTRODUCTION

The University of Maryland's College of Engineering plans to bring to the Baltimore-Washington, D. C. metropolitan area an entirely new advance in continuing education. This new concept will involve a TV Network linking the classroom and the part-time student's place of employment. This concept will enable organizations to plan and carry out a "continuous continuing education program" for their employees. The planned program will make it easier and more convenient for employees to participate where they work. It impacts on a broad cross-section of types and levels of employees and it can be carried out at a cost comparable to an organization's present education budget. All of these attributes are inherent in the Maryland plan.

The University of Maryland Instructional Television Network is the "Educational Delivery System" which makes it possible for employees to participate in educational courses where they work. Live TV broadcasts (supplemented by video tapes) of courses originating from classrooms on the Maryland campus will be transmitted throughout the Baltimore-Washington D. C. metropolitan area to participating organizations. Students at those organizations will participate in the regular course offerings from the regular faculty without leaving their place of employment, and "talk-back" to the instructor by means of FM radio or telephone lines during the regular class.

This concept is not new or experimental. It is proven. Similar systems have been in successful operation in Florida, Texas, Michigan, New York, California and Minnesota for several years.

The Maryland ITV Network will program a broad cross-section of courses directly responsive to industry's needs. These programs include courses for credit leading to the Master of Science degree as well as some of the courses leading to the Ph.D. degrees. In these same courses employees---perhaps for "refresher" purposes---can participate "not-for-credit" but with testing and grading or alternatively, as auditors with no testing or grading. Maryland will utilize the Network for graduate courses (plus undergraduate) in engineering and some related sciences. However, special non-credit courses will also be offered in subjects which could impact on employees at all levels and in most disciplines. These courses may be chosen by the users to be directly responsive to their needs. They will be administered by DELTA, a non-profit educational corporation to be formed by the users of the Maryland ITV Network. DELTA is discussed in more detail in a later section of this proposal.

Cost is an overriding consideration. Even the most enlightened organizations, which believe strongly in continuing education to upgrade and update their employees, are limited in what they can do by cost considerations. In general, costs have been tied to individual student participation; i.e., the more students involved, the greater the cost. In the Maryland plan unlimited student participation at a fixed cost is a vital ingredient. This fixed cost is sufficiently small that it is within the present budget allocations for education of most large organizations or, in some cases, may require a budget comparable to the existing budget.

For the first time, organizations can evolve a "continuous continuing education" program where employees are "expected" to participate, not merely encouraged or even discouraged from doing so. With the attributes built into the Maryland plan, continuing education becomes a management and scheduling problem with a programmed cost rather than a variant and unknown increasing financial burden. Further, long range programs directly aimed at organizational needs can be planned and implemented. By offering this program, the University is demonstrating its desire for increased involvement and service to the community.

LIMITATION OF EXISTING EDUCATION PROGRAMS FOR EMPLOYEES

Although existing educational programs in the Baltimore-Washington, D.C. metropolitan area have contributed greatly to the education of government and industry personnel, they have fallen short of the impact required. One of the inhibiting factors has been the problem of commuting. Many employees work or reside so far from the campus that they are discouraged from undertaking a program of advanced professional development by this method. Present programs require students to travel to the campus with a loss of valuable time---both personal and company.

Although some attempt has been made by the University to alleviate the commuting problem by offering courses at remote sites, it is clear that existing faculty resources could never provide the required diversity of courses nor make the best teaching abilities simultaneously available to all interested students.

The student who must take his courses on campus in the evenings is at a particular disadvantage. Besides the burden of commuting, he must devote one or more evenings to class attendance and several more for preparation and study. Moreover, after a full day's work and the fatigue of travel, the benefit he derives is often below his normal capabilities. Only the most dedicated student can maintain such a regimen over a long period of time. After years of confronting these obstacles, the student often abandons his educational goals, or at best, carries on a protracted and discontinuous program from which he derives marginal benefit. Clearly, government and industry could benefit greatly if some way could be found to overcome this situation.

Another serious problem facing the part-time student employed in a governmental or industrial position is the priority demand often placed on his time by his organization for travel, meetings and emergency schedules which causes him to miss classes, sometimes several in succession. These absences are impossible to fully make up and the corresponding disruption of the student's program often discourages him from long-term educational efforts.

Finally, there is a large potential body of government and industry employees who do not participate at all in postgraduate educational efforts, but who need to upgrade, update and broaden their technical knowledge and proficiency.

These problems are all resolved by the Maryland approach. It includes diversified educational offerings, both degree and non-degree oriented, at the graduate and undergraduate level, presented to the government/industry employee as an extension of his normal work routine, the convenience of taking courses where employed and the fixed cost which overcomes budgetary constraints which have previously inhibited upgrading of many employees.

THE INSTRUCTIONAL TELEVISION NETWORK AND ITS USES

The University proposes, with the support of the industrial and governmental community, to establish a network through which each participating organization can receive up to four simultaneous channels of diversified educational programming, eventually from 7:00 a.m. to 10:00 p.m. in the evening.

A. Academic Programming

The academic programming would be planned and coordinated by the University of Maryland ITV Network offices within the College of Engineering.

The system will enable the government/industry student to avail himself of the regular course offerings (primarily at the graduate level) from the regular faculty without leaving his place of employment. A "talk-back" system will be provided which will enable the off-campus student to participate in the campus class in the same manner as an on-campus classroom student.

Government/industry students can therefore participate in the instructional television program without suffering lost hours and wasted energies in commuting and with minimal disruption of their work and their home routines.

It is planned that receiving installations will include video taping capability with which a temporary library of lectures (erased at the end of each semester) can be maintained for replaying to employees who miss class during the term. This minimizes the effect of absences due to priority demands of the student's work responsibilities.

B. Non-academic Programming

A new non-profit educational organization, called DELTA, will be formed to administer and manage the non-academic programming activities sponsored by those organizations participating in the University of Maryland ITV network. DELTA would be formed by and represent all government/industry organizations participating in this plan. DELTA is an added incentive for government/industry participation as it allows these sponsors to use the network to provide specialized programs for all their employees, at nominal cost. DELTA would use the network facilities during the non-academic hours and give courses directly responsive to the general and educational needs of its constituents.

The DELTA network would offer an unprecedented opportunity, outside of normal working hours, to make available courses which the participating organizations would like to use for their employees' professional development other than those obtained through formal degree oriented courses. These courses may be regular University of Maryland Continuing Education courses, or courses or seminars especially arranged for the participating organizations.

In addition to its non-academic programming activities, DELTA would also act as the registration/fiscal agent for those students participating under the non-Regular Option or Auditor classifications as described in later sections of this proposal and appropriate coordination with the Maryland ITV network administration. The management and operational details of DELTA will be finalized after the basic subscription plan for participation in the program, in general, is complete and the installation of the Maryland network is assured.

VIDEO TAPING

Video taping capability, and use, is an important feature of the Maryland Instructional ITV Network system. Video taping will serve two major functions in the ITV system concept. It will:

- a. Enable both on-campus and off-campus students to use video tapes of the lectures for make-up and review.
- b. Enable use of video tapes for students outside of the live television area so that these students might take courses originating at the University on the same credit basis available to those students within the live TV reception area.

Video taping will be allowed at the receiving locations for make-up and review. This capability negates a major disadvantage of existing continuing education programs. Companies must agree to erase these tapes at the end of each term. The benefits of make-up and review tapes will also be extended to on-campus students.

Video tapes of the live classroom TV presentations will be made available, on a delayed basis, to students of participating organizations located in areas not reached by the live TV system. Such students will be required to meet all entrance requirements, standards and regulations established for students in the live TV area. Regular students taking courses for academic credit will be encouraged to "talk-back" to the instructor once per week during prescribed office hours; this requirement may be modified by an individual faculty member to suit particular course needs. Special registration, counseling, and advising procedures will be provided for these students in the "video-tape only" reception areas; included is the possibility of periodic (once-a-semester) visits to the College Park campus for consultation and performance review purposes.

COMPREHENSIVE EDUCATIONAL PROGRAMMING

The Instructional Television Network will offer government and industry in the Baltimore-Washington, D.C. metropolitan area educational programming designed to meet a broad cross section of employee needs and interests. The Network will transmit not only regular degree courses for both credit and non-credit purposes, but will also transmit material tailored to meet the specialized training needs of participant organizations. The regular academic courses will be offered primarily during the hours of 8:00 a.m. - 6:00 p.m. daily; the non-academic courses will be offered by DELTA primarily during the hours of 7:00 a.m. - 8:00 a.m.; Noon - 1:00 p.m.; and after 6:00 p.m.

The College Park campus of the University of Maryland offers graduate engineering education leading to M.S. and Ph.D. degrees in such engineering fields as Aerospace Engineering, Agricultural Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Engineering Materials, Mechanical Engineering, and Nuclear Engineering. In addition, within the above fields or through appropriate interdisciplinary planning, students may concentrate or diversify their studies to such areas as bioengineering, applied polymer sciences, environmental and water resources engineering, transportation and urban systems engineering, biomedical

engineering, computer systems and a variety of other educational specializations with an engineering foundation. In general, any regular classroom course, whether graduate or advanced undergraduate, offered as a part of these programs should be available for television transmission, assuming that it is being offered on-campus and assuming there is sufficient interest on the part of the off-campus, government/industry, participating students. In addition, the instructor must be willing to teach the course on television and the University must be able to schedule it. Every effort will also be made to augment the programming of engineering courses with appropriate related courses from the sciences and business-management areas as interest warrants.

The non-academic program to be developed by DELTA will consist of a wide variety of courses that could provide for the personal development of all segments of participating organizations' personnel. Typical offerings might include: computer programming, review of differential equations, basic electronics, secretarial skills, review of business law, labor relations, supervisory training, accounting, rapid reading, and financial management. In short, any course government/industry believes it needs for its own purposes may be programmed. When available, regular University courses will support this program.

The policies and registration procedures for students taking courses by television are described below. The various student categories are listed in Figure 1.

1. Regular Student: the regular student is the fully-qualified part-time degree-seeking or non-degree student who is admitted to the University in accordance with the existing requirements and standards. The regular student may complete a major part of his course requirements for the Masters degree via televised course offerings. The regular student may take any of his courses either by television or on campus. Fully-employed regular graduate students may not take more than two courses per semester without special permission from the appropriate academic department and the Graduate School.

2. Non-Registered Option Students (NRO): this category is reserved for students who may take regular academic courses only by television (not-on-campus) for no academic credit. The non-registered option (NRO) student may, for example, be someone who seeks to demonstrate his academic abilities and qualify later for admission as a regular graduate student. He may also be someone who wishes to develop his knowledge and capability in selected technical subjects, but who does not wish to participate in a recognized degree program. Or, he may be someone who already has a degree but is in need of updating to keep abreast of rapid changes in his field. In all these cases, the student may wish to be tested and graded in order to ensure his full participation or because he requires a record of performance and successful completion for his own or his organization's records. Enrollment and record keeping for non-registered option students will be handled by DELTA, which will issue certificates of completion and grades if appropriate.

Permission for participation in the NRO category must be obtained from the appropriate academic department. Although the NRO student will be tested, graded and provided class materials, he will normally not engage in classroom discussion nor avail himself of professors' office hours without prior approval and arrangement. His grades will not be allowed to affect the grade distribution of regular students. After the grade distribution is established for regular student performance, NRO students will be graded relative

to that distribution. NRO students who perform well in competition with regular students may subsequently petition the appropriate academic department and the Graduate School for award of credit for courses taken, to be applied to a regular degree program, provided they are accepted, by the Graduate School, as a fully matriculated student.

3. Auditor: auditors may not be tested nor graded but will receive class materials. The auditor will not be permitted to ask questions during class nor take advantage of professors' office hours. Students who wish to audit courses may take them only via television (unless they wish to attend campus classes under regular University rules and charges pertaining to on-campus auditors).

4. Seminar Attendees: any employee of an organization participating in the Instructional Television Network may attend televised seminars or other special event lectures at no cost, except that if the seminar is taken for University credit, costs will be assessed as though it was a regular course. Prior notification or registration is not required. All seminar attendees can participate in active discussion. Attendance at seminars on campus is, of course, permitted subject to normal campus rules. Seminars will generally be scheduled for the late afternoon.

5. Students Taking Continuing Education (DELTA) Courses: another category of student is the employee who registers for special courses offered through DELTA. These courses may be taught by experts from industry/government or by faculty members of various teaching institutions. DELTA will issue certificates of completion for courses taken. In many instances, these courses will replace current efforts to provide after-hours instruction for employees. These courses are typically the "short courses" given by many institutions throughout the country. They are frequently three to ten day intensive effort courses in specialized fields. The DELTA system provides a means of offering such courses over a more extended period and at a lower net cost.

ADMINISTRATION OF THE OFF-CAMPUS TELEVISION CLASS

An ITV Director will be designated by the University. In order to simplify registration procedures and other details of the program, he will work with government and industry representatives in setting up operational plans. All students who take degree courses by television will be registered in the appropriate department of their major and the Graduate School in the usual manner. Degree seeking students will be advised and administered by the faculty in the same manner as the full-time, on-campus students. Because of this personal contact with the faculty and the campus will be maintained.

No specific limitation on total class size (i.e., the on-campus class plus its television extension) is presently contemplated except that actively participating students in a class will be restricted to a manageable number with respect to the effectiveness of the two-way communication feature of the Network.

Participating organizations will be permitted to video-tape lectures as outlined in the section on Video Tape Recording.